

Docket No.: 20140-00255-US2  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:  
Panayotis C. Andricacos et al.

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Application No.: 10/810,719

Confirmation No.: 8916 JUL 22 2004

Filed: March 29, 2004

Art Unit: 1753

For: ELECTROPLATED COPPER  
INTERCONNECTION STRUCTURE,  
PROCESS FOR MAKING AND  
ELECTROPLATING BATH

Examiner: Not Yet Assigned

OFFICIAL

**INFORMATION DISCLOSURE STATEMENT (IDS)**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed before the mailing date of a first Office Action on the merits as far as is known to the undersigned (37 CFR 1.97(b)(3)).

Copies of the references on the PTO/SB/08 are not provided.

Those patent(s) or publication(s) which are marked with a double asterisk (\*\*) next to the Cite No. in the attached form PTO/SB/08 (facsimile) are not supplied because they were previously cited by or submitted to the Office in a prior application number 09/684,786, filed

Application No.: 10/810,719

Docket No.: 20140-00255-US1

October 10, 2000 and relied upon in this application for an earlier filing date under 35 U.S.C. 120.

In accordance with 37 CFR 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR 1.56(a) exists. In accordance with 37 CFR 1.97(h), the filing of this Information Disclosure statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

It is submitted that the Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 50-0510, under Order No. 20140-00255-US1. A duplicate copy of this paper is enclosed.

Dated: 7-22-04

Respectfully submitted,

By   
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PTO/SB/08a/b (08-03)

Approved for use through 07/31/2008. OMB 0561-0031  
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Substitute for form 1449A/B/PTO			<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)			Application Number	10/810,719-Conf. #8916
			Filing Date	March 29, 2004
			First Named Inventor	Panayotis C. Andricacos
			Art Unit	1753
			Examiner Name	Not Yet Assigned
			Attorney Docket Number	20140-00255-US2
Sheet	1	of	1	

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AA**	US-5,484,518	01/1996	GOLDBERG	
	AB**	US-6,261,433	07/2001	LANDAU	
	AC**	US-6,331,237	12/2001	ANDRICACOS et al.	
	AD**	US-6,113,771	09-05-2000	LANDAU et al.	

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	BA**	EP-0952242	11-16-1998	LANDAU, et al.	

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. \*\*CITE NO.: Those patent(s) or publication(s) which are marked with an double asterisk (\*\*) next to the Cite No. are not supplied because they were previously cited by or submitted to the Office in a prior application relied upon in this application for an earlier filing date under 35 U.S.C. 120. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kind Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 801.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			
	CA**	A Novel Electrolyte Composition for Copper Plating in Wafer Metallization; Electrochemical Processing in ULSI Fabrication and Semiconductor/Metal Deposition II: Proceedings of the International Symposium; P.C.; Uziel LANDAU, et al., The Electrochemical Society, Inc. Proceedings Volume 99-9.			
	CB**	A Model of Superfilling in Damascene Electroplating; H. DELIGIANNI, et al.; The 195 <sup>th</sup> Meeting of Electrochemical Society, Inc. Meeting Abstracts, Volume 99-1 (May 2-6, 1999).			
	CC**	Model of Wafer Thickness Uniformity in an Electroplating Tool; The 195 <sup>th</sup> Meeting of Electrochemical Society, Inc. Meeting Abstracts, Volume 99-1 (May 2-6, 1999).			
	CD**	A Model of Superfilling in Damascene Electroplating; H. DELIGIANNI, et al.; Electrochemical Processing in ULSI Fabrication and Semiconductor/Metal Deposition II: Proceedings of the International Symposium; P.C.; Uziel LANDAU, et al., The Electrochemical Society, Inc., Proceedings Volume 99-9.			
	CE**	Uziel LANDAU, A Novel Electrolyte Composition for Copper Plating in Wafer Metallization, Abstract No. 263.			
	CF**	Model of Wafer Thickness Uniformity in an Electroplating Tool; Electrochemical Processing in ULSI Fabrication and Semiconductor/Metal Deposition II: Proceedings of the International Symposium; P.C.H. DELIGIANNI, et al., The Electrochemical Society, Inc., Proceedings Volume 99-9.			
	CG**	Computational Aspects of the Terminal Effect on Wafer-Scale Uniformity; H. DELIGIANNI et al.; The 195 <sup>th</sup> Meeting of Electrochemical Society, Inc. Meeting Abstracts, Volume 99-1 (May 2-6, 1999).			

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. \*\*CITE NO.: Those patent(s) or publication(s) which are marked with an double asterisk (\*\*) next to the Cite No. are not supplied because they were previously cited by or submitted to the Office in a prior application relied upon in this application for an earlier filing date under 35 U.S.C. 120.

Examiner Signature		Date Considered	
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